

IEC 61850 User Feedback Task Force - Bug #7001

Presence condition of DO in statistic Logical Nodes

09/24/2024 08:06 AM - Aurelie Dehouck

Status:	Resolved	Start date:	09/24/2024
Priority:	Normal	Due date:	
Assignee:	Thierry Dufaure	% Done:	0%
Category:		Estimated time:	0.00 hour
Target version:		To discuss in WG10:	No
ID:		Short Proposal:	
Source:		Standard(s):	
TF Unique ID:		Needs More Information:	No
WG10 Proposal:		Assigned TF:	UML modeling
Estimated Completion:			
Discuss in Upcoming Meeting:	No		

Description

It would seem logical that when a DO is multiple (instanciable, with Omulti/Mmulti) in a LN when it is used "non statistic", then, the same DO is also allowed to be multiple (instanciable, with Omulti/Mmulti) when the LN is used as "statistic"

Example of our use case:

In a non statistical LN, the 2 instances of the DO represents 2 "real time" measures of the same thing :

- WGEN1.BrgTmp1
- WGEN1.BrgTmp2

And a statistical LN is used to represent the 10 min average values of the same measures

- stat WGEN1.BrgTmp1
- stat WGEN1.BrgTmp2

It would seem logical that when presCond allows multiple instantiation, it is also the case for dsPresCond.

Several examples were found when it is not the case in the standard :

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SBAT				
Data object name	Common data class	T	Explanation	PresConds/ds
CelTmpMax	MV		Maximum temperature of all cells in the battery	O / O
CelTmpMin	MV		Minimum temperature of all cells in the battery	O / O
IntnAmp	MV		Internal DC Battery current	O / O
IntnTmp	MV		Internal battery temperature in degrees C	Omulti / O
ExtTmp	MV		External battery temperature in degrees C	O / O
ExtVol	MV		External battery DC voltage.	O / O
IntnVol	MV		Internal battery DC voltage.	O / O

subscribed by the allocated protection logical nodes. A diagram describing RREC operation principle is given in Annex G.

Table 150 shows all data objects of RREC.

Table 150 – Data objects of RREC

RREC				
Data object name	Common data class	T	Explanation	PresConditions/ds
Descriptions				
NamPIt	LPL		inherited from: DomainLN	MONamPIt / MONamPIt
Status information				
TrBeh	ENS (TripBehaviourKind)		Indicates whether next trip must be three-phase, or the function can decide between the three-phase and single-phase tripping (mostly resulting from combination one of 'CycTrMod' and 'RecCyc').	O / F
RecCyc	INS		Number of the actual reclose cycle (1 to 'UseCyc', typically 3), or 0 if no autoreclosing is going on.	O / O
OpCls	ACT	T	If its 'general' is true, the function decided to close circuit breaker (XCBR).	M / F
AutoRecSt	ENS (AutoReclosingKind)		Current autoreclosing status.	M / F
Rec1PhCnt	INS		Counting how many single phase reclosing operations are made in reclosing cycle 1 (2,3...)	Omulti / O
Rec3PhCnt	INS		Counting how many three phase reclosing operations are made in reclosing cycle 1 (2,3...)	Omulti / O

History

#1 - 09/24/2024 08:08 AM - Carlos Rodriguez del Castillo

- Discuss in Upcoming Meeting changed from No to Yes

#2 - 09/24/2024 08:39 AM - Carlos Rodriguez del Castillo

- Status changed from New to In Progress

We think it is a bug in the document generation, we have to investigate.

#3 - 09/24/2024 08:41 AM - Vladan Cvejic

- Assignee set to Thierry Dufaure

#4 - 09/24/2024 09:05 AM - Thierry Dufaure

jCleanCim has been updated to deal with ds presence condition. The strategy so far was to declare an "O" presence condition if the DataObject isUsableForStatistics()

The isUsableForStatistics() solely checks the stereotype of the CDC. The <<statistics>> stereotypes is specified in the model during the CDC definition.

A change in the j61850DocBuilder is necessary to apply a extended strategy for any "<X>multi" presence condition.

Note that this change would have a compatibility impact changing the O to Omulti <> the DataObject MUST have an instance number were it did not with =.

The compatibility impact only the derived static logical node that are not widely used so far.

A tissue should be applied to any namespace that is impacted by the extended strategy: 7-4, 7-420, ...

#6 - 10/14/2024 03:30 AM - Thierry Dufaure

See discussion in #7017

#7 - 10/22/2024 08:15 AM - Carlos Rodriguez del Castillo

- Status changed from *In Progress* to *Resolved*

- Discuss in *Upcoming Meeting* changed from *Yes* to *No*

- Assigned *TF UML modeling* added

- Assigned *TF deleted (None)*

Files

clipboard-202409241455-9hdsm.png	114 KB	09/24/2024	Aurelie Dehouck
clipboard-202409241456-schgd.png	37.6 KB	09/24/2024	Aurelie Dehouck